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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Applicat	tion No.	Applicant(s)		
			827	SCHMIDT, DOMINIK J.		
Office Action Summary		Examine	er	Art Unit		
		CHRIST	OPHER P. GREY	2616		
 Period for	The MAILING DATE of this commun	nication appears on ti	he cover sheet with the	correspondence ad	ddress	
A SHC WHICH - Extens after S - If NO programs	PRTENED STATUTORY PERIOD F HEVER IS LONGER, FROM THE Maions of time may be available under the provisional IX (6) MONTHS from the mailing date of this comberiod for reply is specified above, the maximum set to reply within the set or extended period for reply ply received by the Office later than three months patent term adjustment. See 37 CFR 1.704(b).	MAILING DATE OF T s of 37 CFR 1.136(a). In no e munication. tatutory period will apply and o will, by statute, cause the ap	THIS COMMUNICATIO event, however, may a reply be till will expire SIX (6) MONTHS from optication to become ABANDONE	N. mely filed the mailing date of this common (35 U.S.C. § 133).	•	
Status						
2a)⊠ ∃ 3)□ \$	Responsive to communication(s) file This action is <b>FINAL</b> . Since this application is in condition closed in accordance with the pract	2b)☐ This action is for allowance excep	- non-final. ot for formal matters, pr		e merits is	
Dispositio	on of Claims					
5)	Claim(s) <u>1-4,7,15-19,21 and 23-32</u> a) Of the above claim(s) is/a  Claim(s) is/are allowed.  Claim(s) <u>1-4,7,15-19,21 and 23-32</u> Claim(s) is/are objected to.  Claim(s) are subject to restri	are withdrawn from c	onsideration.			
Applicatio 						
10)□ T /	The specification is objected to by the drawing(s) filed on is/are Applicant may not request that any objected the oath or declaration is objected to	: a) ☐ accepted or bection to the drawing(s) g the correction is requ	be held in abeyance. Se ired if the drawing(s) is ob	e 37 CFR 1.85(a). ojected to. See 37 C	, ,	
Priority ur	nder 35 U.S.C. § 119					
<ul> <li>12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).</li> <li>a) All b) Some * c) None of:</li> <li>1. Certified copies of the priority documents have been received.</li> <li>2. Certified copies of the priority documents have been received in Application No.</li> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
2)  Notice 3) Inform	s) of References Cited (PTO-892) of Draftsperson's Patent Drawing Review (lation Disclosure Statement(s) (PTO/SB/08) No(s)/Mail Date	PTO-948)	4) Interview Summary Paper No(s)/Mail D 5) Notice of Informal I 6) Other:	ate		

Art Unit: 2616

## **DETAILED ACTION**

## Claim Rejections - 35 USC § 103

- 1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 2. Claims 1-4, 7, 15 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over, Kobylinski et al. (US 7242938), hereinafter referred to as Kobylinski, in view of Scholefiled et al. (US 5752193), hereinafter referred to as Scholefiled, and Gorsuch (US 6526034).

Regarding Claim 1, Kobylinski discloses a mobile device (fig 1A, 14, notice the mobile station performs the function) sniffing for available cellular frequency channels of the plurality of cellular channels in a mobile station (fig 1a 14 and 16, where sniffing as defined by the specification involves an RSSI detection for the determination of favorable/available channels, see Col 3 steps 2, 3 and 4).

Kobylinski does not specifically disclose the mobile station requesting, from a base station an allocation of cellular frequency channels from the available frequency channels, responsive to the requesting, the mobile device receiving an allocation of available cellular frequency channels at the mobile station, bonding a short range radio channel with the allocated cellular frequency channels, thus increasing available bandwidth for data communication between the mobile station and the base station and

transmitting data to the base station over the bonded short range radio channel and the allocated cellular frequency channels.

Scholefield discloses the mobile device requesting an allocation of cellular frequency channels from the mobile station in response to the request from the mobile station (fig 6 depicts a mobile sending a request and receiving a response).

Scholefield discloses responsive to the requesting, the mobile device receiving an allocation of available cellular frequency channels (fig 6 depicts an allocation step in response to the request being made by the mobile station).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the method of Koylinski as taught by Scholefiled, since stated in Col 3 lines 55-58 that such a modification will conserve on bandwidth.

The combined teachings of Kobylinski and Scholefield do not specifically disclose bonding a short range radio channel with the allocated cellular frequency channels, thus increasing available bandwidth for data communication between the mobile station and the base station and transmitting data to the base station over the bonded short range radio channel and the allocated cellular frequency channels.

Gorsuch discloses bonding a short range radio channel with the allocated cellular frequency channels (see fig 6, where the short range 802.11 and cellular CDMA components are combined for transceiving, where the output is thus a combined/bonded channel), thus increasing available bandwidth for data communication between the mobile station (fig 5, 617 and 615, notice that both

elements are wirelessly connected to base stations 611 A and 605) and the base station (Col 9 lines 65-67, BW management function allocates more BW).

and transmitting data to the base station over the bonded short range radio channel and the allocated cellular frequency channels (fig 5 depicts a mobile such as 615 and 617 communicating with base station 605 or 611).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Regarding claim 2, The combined teachings of Kobylinski and Scholefield do not specifically disclose wherein said transmitting includes the mobile device transmitting at a given point in time, a first portion of data on the allocated cellular frequency channels and a second portion of the data on a short range radio channel.

Gorsuch discloses wherein said transmitting includes the mobile device transmitting at a given point in time (the examiner notes that any point in time is a given point in time), a first portion of data on the allocated cellular frequency channels and a second portion of the data on a short range radio channel (Col 9 lines 16-24, where the data can be transmitted using the short range transceiver, and when the short range is no longer available, data is transmitted using the long range, thus data is transmitted in portions using different transceivers).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Scholefield,

as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

**Regarding claim 3,** The combined teachings of Kobylinski and Scholefield do not specifically disclose wherein the short range radio channel is Bluetooth or WLAN.

Gorsuch discloses wherein the short range radio channel is Bluetooth or WLAN (fig 6, 201 and 207 WLAN circuits).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Regarding claim 4. The combined teachings of Kobylinski and Scholefield do not specifically disclose the mobile device dynamically discovering a plurality of available radio channel including the short range radio channel.

Gorsuch discloses the mobile device dynamically discovering a plurality of available radio channel including the short range radio channel (Col 9 lines 10-16, where the terminal actively/dynamically receives the response to the request, where this response indicates that the WLAN is within range and thus the channel/s are available for communication).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Regarding Claim 7, The combined teachings of Kobylinski and Scholefield discloses sniffing for available frequency channels as disclosed in the rejection of claim 1, where it would have been obvious to one of the ordinary skill in the art at the time of the invention that some form of circuitry is necessary to perform such a function, and furthermore, more than one sniffing circuit may be used to accomplish the sniffing task, and this combination of circuits is deemed as a parallel combination.

Regarding Claim 15. Kobylinski discloses transmitting cellular packet data conforming to one of the following protocols: cellular digital packet data, GPRS and EDGE (see background, AMPS and GSM).

Regarding Claim 24. Kobylinski does not specifically disclose the mobile station receiving from a user of the mobile device a request for a bandwidth sufficient to communicate at least one file.

Scholefield discloses receiving from a user of the mobile station a request for a bandwidth sufficient to communicate at least one file (Col 4 lines 8-20, where the access request requests a certain number of channels depending on the size of data to be transmitted, where the data to be transmitted is equivalent to a file).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the invention of Kobylinski so as to request a specific amount of bandwidth for communication as disclosed by Scholefiled. The motivation for this combination is to conserve on bandwidth (Col 3 lines 55-58).

Regarding Claim 25. Kobylinski does not specifically disclose the mobile station determining a number of channels for the allocation request based on the size of the at least one file

Scholefield discloses the mobile station determining a number of channels for the allocation request based on the size of the at least one file (Col 4 lines 8-13, determining how many channels based on size of data).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the mobile station as disclosed by Kobylinski to make the determination of the number of channels to request as disclosed by Scholefiled. The motivation for this modification is to conserve on bandwidth (Col 3 lines 55-58).

Regarding claim 26. The combined teachings of Kobylinski and Scholefield do not specifically disclose wherein said binding is performed responsive to a request from a user of the mobile device

Gorsuch discloses wherein said binding is performed responsive to a request from a user of the mobile device (Col 9 lines 10-16, where the probe request is sent by the mobile, and when it is determined that no response has been received, long range is combined/bonded).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Application/Control Number: 09/930,827

Art Unit: 2616

Regarding Claim 27. Kobylinski does not specifically disclose requesting the allocation of cellular frequency channels comprising requesting an allocation of preferably adjacent cellular frequency channels (portable terminal demands the master microprocessor for available radio channels.

Page 8

Scholefiled discloses requesting the allocation of cellular frequency channels comprising requesting an allocation of preferably adjacent cellular frequency channels (portable terminal demands the master microprocessor for available radio channels and Col 4 lines 15-25, where the mobile station sends a request to all three time slots 1-3, where in fig 2, time slots 1-3 are clearly adjacent).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the invention of Koblinski so as to perform a request and confirmation procedure as disclosed by Scholefiled. The motivation for this modification is to enable the transmission of data over a channel. The motivation for this combination is to conserve on bandwidth (Col 3 lines 55-58).

3. Claims 16, 17, 19, 23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (US 5752193) in view of Gorsuch (US 6526034)

Regarding Claim 16, Scholefield discloses at least one of the processing units (see fig 1, 106 for processor) calculating a number of cellular frequency channels to request from a base station (see fig 6 for requesting by mobile station to a base station) for transmission of a file from the mobile device, wherein the number of

requested cellular frequency channels corresponds to a size of the file (Col 4 lines 8-13, determining how many channels based on size of data).

Scholefield discloses a radio frequency sniffer coupled to the at least one of the transceivers (fig 1 shows a processor, antenna and transceiver. Furthermore, Col 4 lines 42-44 discloses the mobile station in fig 1 using a scanning procedure, equivalent to sniffing, where the function requires some means inherently disclosed within the mobile station).

Scholefield does not specifically disclose a long range transceiver unit communicating over a plurality of cellular frequency channels and a short range transceiver coupled to the processing units and configured to communicate over a short range radio channel, wherein the sniffer is configured to provide signals used to dynamically discover available radio channels including the short range radio channel, a circuit configured to bond the short range radio channel with one or more of the plurality of cellular frequency channels, thus increasing a bandwidth of data communication between the mobile device and the base station, wherein the long range transceiver and the short range communication are configured to transmit respective portions of the file to the base station over the bonded short range radio channel and one or more of the plurality of cellular frequency channels allocated by the base station.

Gorsuch discloses a long range transceiver unit (fig 6, 140) communicating over a plurality of cellular frequency channels (fig 2 shows a plurality of cellular channels) and a short range transceiver (fig 6, 240) coupled to the processing units and configured to communicate over a short range radio channel,

wherein the sniffer is configured to provide signals used to dynamically discover available radio channels including the short range radio channel (Col 9 lines 10-15, where the signals/requests are sent actively/dynamically, in order to determine the availability of the short range channel/s),

a circuit (fig 6, 211b, where the short range and long range are combined/bonded) configured to bond the short range radio channel with one or more of the plurality of cellular frequency channels, thus increasing a bandwidth of data communication between the mobile device and the base station (Col 9 lines 65-67, BW management function allocates more BW),

wherein the long range transceiver and the short range communication are configured to transmit respective portions of the file to the base station over the bonded short range radio channel and one or more of the plurality of cellular frequency channels allocated by the base station (Col 9 lines 16-24, where the data can be transmitted using the short range transceiver, and when the short range is no longer available, data is transmitted using the long range, thus data is transmitted in portion using different transceivers).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method of Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Regarding Claim 17. Scholefield discloses the reconfigurable processor core including a plurality of digital signal processors (Col 7 lines 30-41, DSP's).

Regarding Claim 19, Scholefield does not specifically disclose router coupled to the one or more processing units.

Gorsuch discloses a switch/router coupled to the one or more processing units (to switch from direct RF interface to the use of Bluetooth interface, fig 6, 211).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method of Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Regarding Claim 23, Scholefield discloses the reconfigurable processor core being configured to determine a number of channels to be used for the data communication based upon a user request for the data communication (Col 4 lines 8-13, determining how many channels based on size of data).

Regarding claim 30, Scholefield discloses first means for requesting, from a base station, an allocation of available cellular frequency channels (Col 4 lines 8-20, requesting being made on each channel).

Scholefield does not specifically disclose second means for binding a short range radio channel with allocated cellular frequency channel to increase available bandwidth for data communication between the mobile communication device and the base station and third means for transmitting data to the base station over the bonded short range radio channel and the allocated cellular frequency channels.

Gorsuch discloses second means for bonding a short range radio channel with allocated cellular frequency channel (fig 6, where the switch 211 bonds both the

long and short range devices and channels) to increase available bandwidth for data communication between the mobile communication device and the base station (Col 9 lines 65-67, BW management function allocates more BW)

and third means for transmitting data to the base station over the bonded short range radio channel and the allocated cellular frequency channels (antenna 150 in fig 6 is equivalent to a 3<sup>rd</sup> means for transmitting the bonded short and long range data to the base stations).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method of Scholefield, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

- 4. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (US 5752193) in view of Gorsuch (US 6526034) as applied to the rejected claims above, and further in view of Rosener et al. (US 2002/002865)
- <u>Claim 18</u> The combined teachings of Scholefield and Gorsuch do not specifically disclose the reconfigurable processor core including one or more reduced instruction set computer processors.

Rosener discloses the reconfigurable processor core including one or more reduced instruction set computer processors (claim 17 and fig 9).

Art Unit: 2616

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Scholefield and Gorsuch as taught by Rosener, since stated in para 0060, that such a modification will allow the phone to access a Bluetooth network and another long range network associated with the base station.

<u>Claim 21</u> Scholefield discloses an integrated circuit (Col 7 lines 30-40).

The combined teachings of Scholefield and Gorsuch do not specifically disclose the reconfigurable processor core comprising an integrated circuit formed on a single substrate including the one or more processing units, the long range transceiver, and the short range transceiver

Rosener discloses the reconfigurable processor core comprising an integrated circuit formed on a single substrate including the one or more processing units, the long range transceiver, and the short range transceiver (see figs 9 A and B).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the combined teachings of Scholefield and Gorsuch as taught by Rosener, since stated in para 0060, that such a modification will allow the phone to access a Bluetooth network and another long range network associated with the base station.

5. Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over, Kobylinski et al. (US 7242938), hereinafter referred to as Kobylinski, in view of Gorsuch (US 6526034)

Regarding claim 28, Kobylinski discloses a radio frequency sniffer unit configured to detect available cellular frequency channels and short-range radio channels(fig 1a 14 and 16, where sniffing as defined by the specification involves an RSSI detection for the determination of favorable/available channels, see Col 3 steps 2, 3 and 4).

Kobylinski does not specifically disclose a processing unit configured to request, from a base station, an allocation of one or more of the available cellular frequency channels; a long-range transceiver and a short-range transceiver both coupled to the processing unit and configured to communicate over the cellular frequency channels and the short-range radio channels, respectively; and a circuit coupled to the long-range transceiver and the short-range transceiver and configured to bond one or more available short-range radio channels with one or more allocated cellular frequency channels, thus increasing a bandwidth of data communication between the mobile communication device and the base station; wherein the long-range transceiver and a short-range transceiver are further configured to transmit data to the base station over the one or more bonded short-range radio channels and the one or more allocated cellular frequency channels.

Gorsuch discloses a processing unit configured to request, from a base station, an allocation of one or more of the available cellular frequency channels (Col 9 lines 10-15, probe request).

Art Unit: 2616

a long range transceiver unit (fig 6, 140) communicating over a plurality of cellular frequency channels (fig 2 shows a plurality of cellular channels) and a short range transceiver (fig 6, 240) coupled to the processing units and configured to communicate over a short range radio channel,

a circuit (fig 6, 211b, where the short range and long range are combined/bonded) configured to bond the short range radio channel with one or more of the plurality of cellular frequency channels, thus increasing a bandwidth of data communication between the mobile device and the base station (Col 9 lines 65-67, BW management function allocates more BW),

wherein the long range transceiver and the short range communication are configured to transmit respective portions of the file to the base station over the bonded short range radio channel and one or more of the plurality of cellular frequency channels allocated by the base station (Col 9 lines 16-24, where the data can be transmitted using the short range transceiver, and when the short range is no longer available, data is transmitted using the long range, thus data is transmitted in portion using different transceivers).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the method of Kobylinski, as taught by Gorsuch, since stated in Col 4 lines 12-21, that such a modification will provide bandwidth as necessary at critical times.

Art Unit: 2616

6. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobylinski et al. (US 7242938) in view of Gorsuch (US 6526034) as applied to claim discussed above, and further in view of Holshouser (US 6282433).

Regarding claim 29, The combined teachings of Kobylinski and Gorsuch do not specifically disclose wherein the long range transceiver and a short range transceiver are further configured to concurrently transmit data to the base station over both the one or more bonded short range radio channels and the one or more allocated cellular frequency channels.

Holshouser discloses wherein the long range transceiver and a short range transceiver are further configured to concurrently transmit data to the base station over both the one or more bonded short range radio channels and the one or more allocated cellular frequency channels (Col 1 lines 30-45, where both transceivers, short range and cellular may be active at the same time, thus concurrently transmitting data).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Kobylinski and Gorsuch as taught by Holshouser, since stated in Col 1 lines 30-45 that such a modification will adopt wireless technology within a cellular phone.

Art Unit: 2616

7. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (US 5752193) in view of Gorsuch (US 6526034) as applied to rejected claims above, and further in view of Kobylinski (US 7242938)

**Regarding claim 31,** The combined teachings of Scholefield and Gorsuch do not specifically disclose fourth means for sniffing for available cellular frequency channels.

Kobylinski discloses fourth means for sniffing for available cellular frequency channels (fig 1a 14 and 16, where sniffing as defined by the specification involves an RSSI detection for the determination of favorable/available channels, see Col 3 steps 2, 3 and 4).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Scholefiled and Gorsuch, as taught by Kobylinski, since stated in the abstract that such a modification will improve the use of received signal strength measurements.

8. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholefield et al. (US 5752193) in view of Gorsuch (US 6526034) as applied to the rejected claims above, and further in view of Holshouser (US 6282433)

Regarding claim 32. The combined teachings of Scholefield and Gorsuch do not specifically disclose wherein said third means is configured to transmit, in parallel, data from the mobile communication device to the base station using the one or more bonded short range radio channels and the one of more allocated cellular frequency channels.

Holshouser discloses wherein said third means is configured to transmit, in parallel, data from the mobile communication device to the base station using the one or more bonded short range radio channels and the one of more allocated cellular frequency channels (Col 1 lines 30-45, where both transceivers, short range and cellular may be active at the same time, thus concurrently transmitting data).

It would have been obvious to one of the ordinary skill in the art at the time of the invention was disclosed to modify the combined teachings of Scholefield and Gorsuch as taught by Holshouser, since stated in Col 1 lines 30-45 that such a modification will adopt wireless technology within a cellular phone.

## Response to Arguments

**9.** Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

## Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. GREY whose telephone number is (571)272-3160. The examiner can normally be reached on 10AM-7:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/ Supervisory Patent Examiner, Art Unit 2616 /Christopher P Grey/ Examiner, Art Unit 2616